

# The accountability imperative for quantifying the uncertainty of emission forecasts: evidence from Mexico”

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**Title**
"The accountability imperative for quantifying the uncertainty of emission forecasts: evidence from Mexico"

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**Abstract**
Governmental climate change mitigation targets are typically developed with the aid of forecasts of greenhouse-gas (GHG) emissions. The robustness and credibility of such forecasts depends, among other issues, on the extent to which forecasting approaches can reflect prevailing uncertainties. We apply a transparent and replicable method to quantify the uncertainty associated with projections of gross domestic product growth rates for Mexico, a key driver of GHG emissions in the country. We use those projections to produce probabilistic forecasts of GHG emissions for Mexico. We contrast our probabilistic forecasts with Mexico's governmental deterministic forecasts. We show that, because they fail to reflect such key uncertainty, deterministic forecasts are ill-suited for use in target-setting processes. We argue that (i) guidelines should be agreed upon, to ensure that governmental forecasts meet certain minimum transparency and quality standards, and (ii) governments should be held accountable for the appropriateness of the forecasting approach applied to prepare governmental forecasts, especially when those forecasts are used to derive climate change mitigation targets.

POLICY INSIGHTS
. No minimum transparency and quality standards exist to guide the development of GHG emission scenario forecasts, not even when these forecasts are used to set national climate change mitigation targets.
. No accountability mechanisms appear to be in place at the national level to ensure that national governments rely on scientifically sound processes to develop GHG emission scenarios.
. Using probabilistic forecasts to underpin emission reduction targets represents a scientifically sound option for reflecting in the target the uncertainty to which those forecasts are subject, thus increasing the validity of the target.
. Setting up minimum transparency and quality standards, and holding governments accountable for their choice of forecasting methods could lead to more robust emission reduction targets nationally and, by extension, internationally.